A NEW STATION FOR RHODODENDRON MAXIMUM IN NORTHERN VERMONT

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The most northerly known station in Vermont for *Rhododendron maximum* L. has been found only 8 miles south of the Quebec border, not far from the village of Troy. The discovery was made in June 1957 by Dr. Charles G. Doll, Vermont State Geologist, while conducting field work in preparation for a new geological map of the state. Professor Doll guided the writers to the site on July 3, 1962 at which time a careful examination of the colony was made.

Located in the northwestern section of Troy township, ½ mile south of Troy village, the rhododendron colony is on a level moss-covered site about 200 feet from the southeastern bank of the Missisquoi River. The oval-shaped colony, covering an estimated ½ acre, is under an open stand of young trees of fir, yellow birch and red maple, with trunk diameters up to 10 inches. Surrounding this area is an older, denser second growth forest dominated by hemlock, fir, yellow birch, and red maple with an extensive cover of yew in the understory. The rhododendrons, toward the center of the colony, are dense and grow to heights of about 6 feet, while toward the edge of the colony they are lower and much sparser, finally becoming broken into small scattered clumps. Some of the latter grow under dense forest cover.

No flowers or flower buds were seen and there was no indication that the plants had flowered the previous year. A careful search failed to disclose any seedlings in the area and it seems unlikely that the colony had flowered in recent years.

A striking feature of the rhododendrons is the appearance of many drooping, browned leaves toward the ends of some of the branches, giving one the impression that the plants are lacking sufficient water. The mossy cover beneath the colony appeared to be unusually dry for early summer. Dr. Doll indicated that in the summer of 1957 he had noted the same leaf condition as well as the absence of flowers and

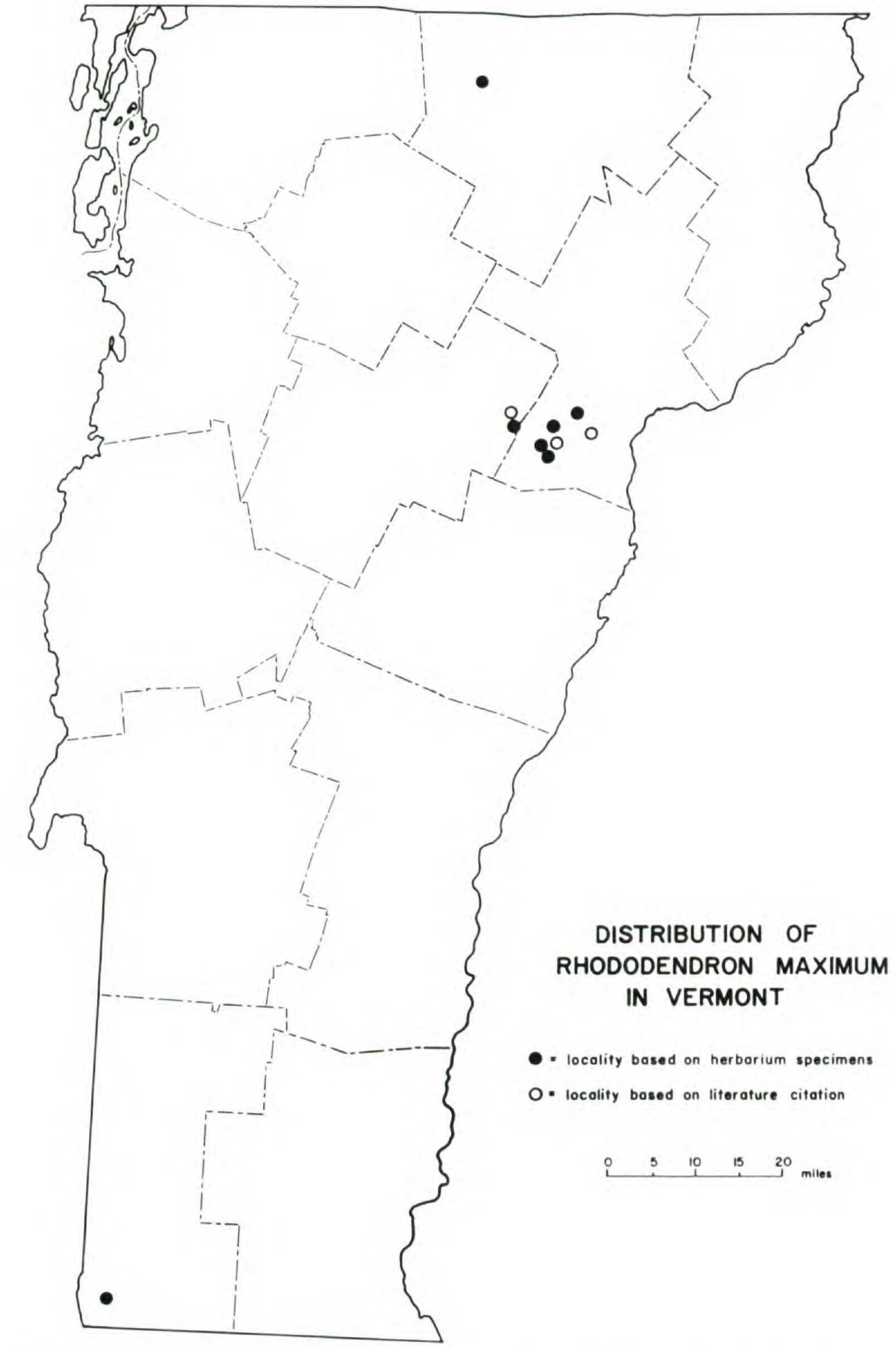
fruits. Toward the periphery of the main stand, the stems of dead rhododendrons are conspicuous and these appear to have once linked some of the smaller scattered colonies with the main colony. A similar condition apparently occurs in the outlying colony in Lexington, Maine where many dead plants are reportedly found near the edge of the stand (4, 8). The general aspect of the Vermont colony may be a further indication of the widespread deterioration of rhododendrons in northern and central New England (4). The dot map given by Iltis (7) shows the range of the species and clearly illustrates the disjunct distribution of colonies in the northern part of its range.

Growing among the rhododendrons is an assemblage of northern shrubs and herbs. *Nemopanthus mucronata* and *Viburnum cassinoides* are common along with seedlings of *Betula lutea* which grow in the mossy cover with an abundance of *Clintonia borealis* and *Coptis groenlandica.* Occasional in the shrubby layer are *Pyrus americana, Viburnum alnifolium* and *Vaccinium myrtilloides.* Associated herbs include *Osmunda cinnamomea, O. regalis,* var. *spectabilis, Dryopteris spinulosa, Cypripedium acaule, Cornus canadensis, Gaultheria hispidula, Maianthemum canadense, Trientalis borealis, Trillium undulatum, Dalibarda repens, Linnaea borealis* var. *americana* and *Carex intumescens.*

The Troy colony is 40 miles north of the nearest known rhododendron stations near Lanesboro and Peacham, Vermont, where several colonies grow along the borders of some of the ponds in the region. At a latitude of 44°53′ the new stand is almost as far north as the colony in Lexington, Maine, which is reported to be at about 45° north latitude. (8). The colony in Troy must be subjected to severe climatic stresses for the station is only 9 miles west of Newport, Vermont, which is noted for its cold winters, and in five of the last ten years has recorded temperatures of -30° F. or lower. In January 1957 the temperature dropped to -38° F. and a record low of -40° F. occurred in 1933.

A summary of the known Vermont stations of *Rhododendron maximum* which are supported by herbarium specimens is as follows:

ORLEANS COUNTY: Troy, *C. G. Doll, H. W. Vogelmann* and *L. A.*



Map. 1. Showing distribution of *Rhododendron maximum* colonies in Vermont.

Charette (No. 2451) July 3, 1962 (VT., NEBC, HNH). WASHINGTON COUNTY: Lanesboro, *Miss M. P. Skinner* (VT. NEBC); *J. G. Jack*, Aug. 16, 1901 (A). CALEDONIA COUNTY: Shores of Groton Pond, *J. A. Bates*, July 1897 (NEBC, HNH), *L. R. Jones*, July 4, 1898 (VT.); Shore of Long Pond, Ricker Station, *C. G. Pringle*, July 1879 (A); Groton, *W. H. Blanchard*, Oct. 7, 1911 (GH); Shore of Martin's Pond, Peacham, *F. Blanchard*, July 1881 (NHA); Peacham, *Alice F. Stevens*, July 26, 1892 (HNH), *F. Blanchard*, July 9, 1883 (A, HNH). BENNINGTON COUNTY: Pownal Center, *D. S. Carpenter*, June 28, 1922 (VT).

A station at Niggerhead Pond in Washington County is given in the 1900 edition of the Vermont Flora (2) and it is also reported at Harvey's Pond in West Barnet (1, 3). Knowlton (8) records it at Ricker and Levi Ponds in the Groton area.

These locations are plotted on Map 1 to show the distribution of *Rhodendron maximum* colonies in Vermont. When these localities are coupled with those given in recent issues of Rhodora for New Hampshire and Maine (5, 6) a fairly accurate distribution of the species in New England is obtained. — UNIVERSITY OF VERMONT, BURLINGTON.

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